

REMARKS / ARGUMENTS

I. General Remarks

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of this application, including the references that Applicants have submitted in this case and, pursuant to MANUAL OF PATENT EXAMINING PROCEDURE § 609.02, all references submitted in the patent applications to which this application claims priority under 35 U.S.C. § 120.

II. Disposition of Claims

Claims 1-7, 33, and 34 are pending in this application. Claims 1-7 stand rejected under 35 U.S.C. § 103(a). The Final Office Action has objected to claims 33 and 34.

Claim 1 has been amended herein. This amendment is supported by the specification as filed, and it should not be assumed that this amendment was made for reasons relating to patentability.

III. Rejections of Claims Under § 103(a)

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,002,125 to Phillips *et al.* ("*Phillips*"). With respect to these rejections, the Final Office Action states:

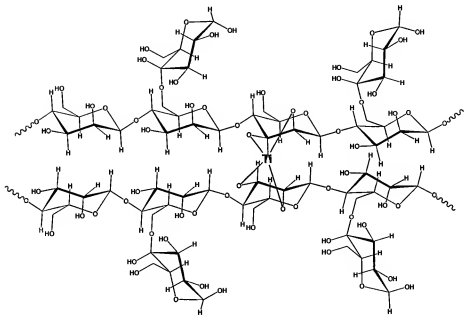
Applicant's arguments filed April 13, 2007 have been fully considered but they are not persuasive. Applicants argue against the rejection on the ground that the Phillips *et al* patent does not disclose the step of "derivatizing a polysaccharide with a metal coordinating group to produce a derivatized polysaccharide having bidentate ligands," as recited in instant Claim 1. Applicants argument is not persuasive since the crosslinking procedure disclosed in the Phillips *et al* patent embraces the derivatizing step of the instant Claim 1. *The term "metal coordinating group" recited in step (b) is too broad and does not distinguish from the titanium acetylacetonate reacted with the hydroxypropyl guar in the Phillips et al patent, even-though this reaction is described in the Phillips et al patent as a crosslinking procedure.* Both the instant claims and the Phillips *et al* patent recite a method of crosslinking a polysaccharide and the process steps and description of the reactants recited in the instant claims is insufficient to distinguish said process steps and reactants from those recited in the Phillips *et al* patent. Accordingly, the rejection of Claims 1-7 under 35 U.S.C. 103(a) as being unpatentable over Phillips *et al* patent is maintained for the reasons of record.

(Final Office Action at ¶ 3) (emphasis added)).

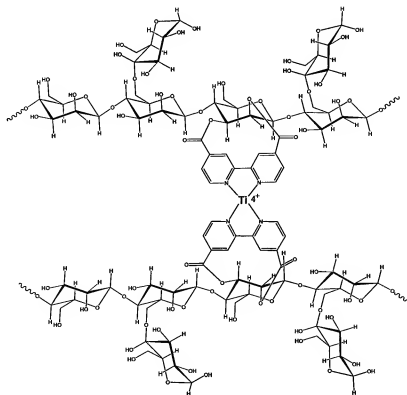
To form a basis for a § 103(a) rejection, a prior art reference must teach or suggest each element in the claim. MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) § 2142 (2007). Moreover, as in this case, where a reference must be modified to achieve the claimed invention, “obviousness can only be established . . . where there is some teaching, suggestion, or motivation to do so.” *Id.* at § 2143.01 (citing *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006)). “The teaching, suggestion, or motivation must be found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” *Id.* In this response, Applicants have amended claim 1 to recite “derivatizing a polysaccharide with the metal coordinating group to produce a derivatized polysaccharide having bidentate ligands *bonded to the polysaccharide*.” Applicants respectfully submit that *Phillips* does not teach such a structure, nor would a person of skill in the art be motivated to employ the process disclosed in *Phillips* to produce a derivatized polysaccharide having bidentate ligands bonded to the polysaccharide, as recited in claim 1, as amended.

The Final Office Action suggests that the derivatizing process recited in step (b) of claim 1 does not distinguish from the crosslinking interaction between titanium acetylacetonate reacted with the hydroxypropyl guar in *Phillips*. Applicants maintain that the derivatizing step recited in original claim 1 is not taught by or obvious in view of *Phillips*. However, Applicants have amended claim 1 to specify that the claimed derivatization step produces a structure *wherein the bidentate ligands are bonded to the polysaccharide*, which the crosslinking interaction in *Phillips* does not produce.

As Applicants have discussed in their previous responses, the crosslinking interaction taught in *Phillips* results in a structure wherein the titanium ions may interact without the polysaccharide molecules becoming bonded to the ligands associated with the titanium ion, for example, as shown below:



In contrast, Applicants' claim 1, as amended, recites derivatizing a polysaccharide with a metal coordinating group to produce a derivatized polysaccharide having bidentate ligands bonded to the polysaccharide. For example, guar may be derivatized with bipyridine ligands, which then become crosslinked to form a metal ligand coordination complex, resulting in a different structure:



Thus, the crosslinking process described in *Phillips* does not produce a derivatized polysaccharide as recited in Applicants' claims, as amended.

Nor would a person of skill in the art would be motivated to use the procedures disclosed in *Phillips* to perform the derivatization step having this structure. As Applicants have discussed in their prior responses, derivatizing and cross-linking are completely different chemical reactions that result in completely different molecular structures (for example, as illustrated in Equations 2 and 3 of Applicants' specification, respectively). (See Amendment and Response to Non-Final Office Action Mailed December 8, 2005 (response filed March 8, 2006) at 5; Amendment and Response to Non-Final Office Action Mailed December 15, 2006 (response filed April 13, 2007) at 7; Amendment and Response to Non-Final Office Action Mailed June 22, 2007 (response filed November 21, 2007).) As Applicants have discussed, cross-linking interactions and derivatization reactions typically involve completely different reaction conditions (e.g., reaction time). A person of skill in the art would recognize these significant differences, and thus would not assume that a procedure only used for cross-linking in *Phillips* could be used or readily modified to derivatize a polysaccharide with a metal coordinating group to produce a derivatized polysaccharide having bidentate ligands bonded to the polysaccharide. Applicants incorporate herein all of their remarks set forth in their previous responses showing that it would not be obvious to a person of ordinary skill in the art to modify the methods described in *Phillips* to perform the derivatization step recited in claim 1, as amended.

Therefore, Applicants respectfully assert that, because there is no motivation to modify the procedures disclosed in *Phillips* to perform the methods recited in claim 1, that claim is allowable over *Phillips*. Moreover, since "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers," and since claims 2-7 depend, either directly or indirectly, from independent claim 1, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully requests the withdrawal of these rejections.

IV. Allowable Subject Matter

The Final Office Action has objected to claims 33 and 34 as being dependent on a rejected base claim, but states that these claims would be allowable if rewritten in independent form to include all elements of the base claim and any intervening claims. (See Final Office

Action at 3). Applicants thank the Examiner for this acknowledgement. As Applicants submit that they have overcome the rejections of claim 1 (the only claim from which claims 33 and 34 depend) with the amendments and remarks contained herein, Applicants respectfully submit that claims 33 and 34 are allowable as presented herein.

V. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are sufficient to overcome the rejections and objections stated in the Final Office Action.

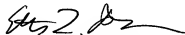
**SUMMARY AND PETITION FOR A ONE-MONTH EXTENSION OF TIME
TO FILE THIS RESPONSE**

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Applicants respectfully request that the Examiner issue an advisory action if the Examiner does not find the claims to be allowable in light of the amendments and remarks made herein. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants hereby petition under the provisions of 37 C.F.R. § 1.136(a) to extend the time for reply to the Final Office Action mailed on March 18, 2008 for 1 month from June 18, 2008 to July 18, 2008.

The Commissioner is hereby authorized to debit Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0175, in the amount of \$120.00 for the one-month extension of time to file this Response. Should the Commissioner deem that any additional fees are due, including any fees for extensions of time, the Commissioner is authorized to debit Baker Botts L.L.P. Deposit Account No. 02-0383, Order Number 063718.0175, for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,



Elizabeth L. Durham
Registration No. 59,509
BAKER BOTTS L.L.P.
One Shell Plaza
910 Louisiana
Houston, TX 77002
Telephone: 713.229.2104
Facsimile: 713.229.7704
Email: liz.durham@bakerbotts.com

Date: July 17, 2008